

IN THE CLAIMS:

1. (Currently Amended) A line driver couplable to a transmission path having line characteristics associated therewith, comprising:

a driver stage configured to send a signal along said transmission path, said driver stage including:

a first differential amplifier receiving a first differential signal on a first differential input pair, and

a second differential amplifier, coupled to said first differential amplifier, receiving a second differential signal on a second differential input pair, said first and second differential signals corresponding to said signal; and

a switching network, coupled to said first and second differential amplifiers driver stage, configured to adaptively select a voltage level to apply across said first and second differential amplifiers driver stage to provide a power level to send said signal as a function of said line characteristics of said transmission path.

2. (Currently Amended) The line driver as recited in Claim 1 wherein ~~said driver stage comprises a plurality of amplifiers configured to amplify said signal and~~ said voltage level is applied across each of said first and second differential plurality of amplifiers.

3. (Currently Amended) The line driver as recited in Claim 2 wherein said driver stage comprises a reference circuit configured to provide a reference level associated with said first and second differential plurality of amplifiers, said reference circuit coupled between positive and negative power supply terminals of said first and second differential amplifiers.

4. (Previously Presented) The line driver as recited in Claim 1 wherein said switching network comprises a plurality of switches configured to adaptively select said voltage level.

5. (Original) The line driver as recited in Claim 1 wherein said switching network comprises a plurality of switches configured to couple an output of said line driver to ground.

6. (Currently Amended) The line driver as recited in Claim 4 wherein said switching network includes a positive rail switch connecting either a first supply voltage or a ground voltage to a positive power supply terminal of said first and second differential amplifiers ~~voltage level includes a level up to about 21 volts.~~

7. (Currently Amended) The line driver as recited in Claim 6 wherein said switching network further includes a negative rail switch connecting either a second supply voltage or a ground voltage to a negative power supply terminal of said first and second differential amplifiers ~~line driver forms a portion of a front end of a transceiver.~~

8. (Currently Amended) A method of operating a line driver coupled to a transmission path having line characteristics associated therewith, comprising:

sending a signal along said transmission path; and

adaptively selecting a voltage level to apply across a driver stage of said line driver to provide a power level for sending said signal as a function of said line characteristics of said transmission path, said driver stage including:

a first differential amplifier receiving a first differential signal on a first differential input pair, and

a second differential amplifier, coupled to said first differential amplifier, receiving a second differential signal on a second differential input pair, said first and second differential signals corresponding to said signal.

9. (Currently Amended) The method as recited in Claim 8 further comprising applying said voltage level across each of said first and second differential amplifiers wherein said driver stage comprises a plurality of amplifiers that amplify said signal.

10. (Currently Amended) The method as recited in Claim 9 wherein said sending further comprises providing a reference level associated with said first and second differential plurality of amplifiers, said providing including determining said reference level by coupling a reference circuit between positive and negative power supply terminals of said first and second differential amplifiers.

11. (Original) The method as recited in Claim 8 wherein said adaptively selecting is performed by a switching network comprising a plurality of switches.

12. (Original) The method as recited in Claim 8 wherein said adaptively selecting further comprises coupling an output of said line driver to ground.

13. (Currently Amended) The method as recited in Claim 11 & wherein said switching network includes a positive rail switch connecting either a first supply voltage or a ground voltage to a positive power supply terminal of said first and second differential amplifiers voltage level includes a level up to about 21 volts.

14. (Currently Amended) The method as recited in Claim 13 & wherein said switching network further includes a negative rail switch connecting either a second supply voltage or a ground voltage to a negative power supply terminal of said first and second differential amplifiers line driver forms a portion of a front end of a transceiver.

15. (Currently Amended) A transceiver coupled to a transmission path having line characteristics associated therewith, comprising:

a conversion stage that converts signals between an analog and digital domain;

a filter stage, coupled to said conversion stage, that filters said signals; and

a line driver, including:

a driver stage configured to send a signal along said transmission path, said driver stage including:

a first differential amplifier receiving a first differential signal on a first differential input pair, and

a second differential amplifier receiving a second differential signal on a second differential input pair, said first and second differential signals corresponding to said signal; and

a switching network, coupled to said first and second differential amplifiers driver stage, configured to adaptively select a voltage level to apply across said first and second differential amplifiers driver stage to provide a power level to send said signal as a function of said line characteristics of said transmission path.

16. (Currently Amended) The transceiver as recited in Claim 15 wherein ~~said driver stage comprises a plurality of amplifiers configured to amplify said signal and~~ said voltage level is applied across each of said first and second differential plurality of amplifiers.

17. (Currently Amended) The transceiver as recited in Claim 16 wherein said driver stage comprises a reference circuit configured to provide a reference level associated with said first and

second differential plurality of amplifiers, said reference circuit coupled between positive and negative power supply terminals of said first and second differential amplifiers.

18. (Previously Presented) The transceiver as recited in Claim 15 wherein said switching network comprises a plurality of switches configured to adaptively select said voltage level.

19. (Original) The transceiver as recited in Claim 15 wherein said switching network comprises a plurality of switches configured to couple an output of said line driver to ground.

20. (Currently Amended) The transceiver as recited in Claim 18 ~~15~~ wherein said switching network includes:

a positive rail switch connecting either a first supply voltage or ground voltage to a positive power supply terminal of said first and second differential amplifiers, and

a negative rail switch connecting either a second power supply voltage or a ground voltage to a negative power supply terminal of said first and second differential amplifiers ~~voltage level~~
~~includes a level up to about 21 volts.~~